

Attorney Docket No. P13364

REMARKS/ARGUMENTS**1.) Claim Amendments**

The Applicant has amended claims 1, 6, 7, 10-13, and 18. Claims 16 and 17 have been canceled, and claims 19-29 have been added. Accordingly, claims 1-15 and 18-29 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2.) Claim Rejections – 35 U.S.C. § 102(e)

In paragraphs 1-2 of the Office Action, the Examiner rejected claims 1-4, 7-9, 11 and 17 under 35 U.S.C. § 102(e) as being anticipated by Kim, et al. (US 6,175,592). The Applicant has amended the claims to better distinguish the claimed invention from Kim. The Examiner's consideration of the amended claims is respectfully requested.

Kim discloses a discrete cosine transform (DCT) filter for lowpass filtering a high resolution encoded video image represented as frequency-domain coefficient values before decimation of the video image in the spatial domain. The Examiner points to Kim column 5, lines 2-9 (and thus FIG. 2A) for teaching the Applicant's steps of downscaling the compressed video bit stream, and thereafter, decoding the downscaled compressed video bit stream. However, the Applicant's reading of Kim does not reveal this teaching. In particular, Kim does just the opposite by decoding the compressed video stream prior to lowpass filtering. With reference to FIG. 2A, Kim states in column 5, lines 45-53 and 60-65:

The Main Profile, High Level bit-stream is received and decoded by [a variable length decoder] VLD 210. In addition to header information used by the HDTV system, the VLD 210 provides DCT coefficients for each block and macroblock, and motion vector information. The DCT coefficients are run length decoded in the R/L decoder 212 and inverse quantized by the inverse quantizer 214.... The R/L Decoder 212 provides the DCT coefficients to the DCT filter 216 which performs a lowpass filtering in the frequency domain by weighting the DCT coefficients with predetermined filter coefficient values before providing them to the IDCT processor 218.

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This process is precisely the problem described in the Background section of Applicant's specification. Decoding with full resolution and then downscaling is a complex process, which is quite demanding of both memory and CPU capacity in the receiver apparatus.

Amended claim 1 recites a method of decoding a compressed video bit stream corresponding to a compressed video signal having a first resolution to a video signal having a second resolution lower than the first resolution. The method *first* downscales the compressed video bit stream by *removing transform components*, and *thereafter*, the method decodes the downscaled compressed video bit stream to provide the video signal having the second resolution. The Applicant contends that Kim does not disclose removing the transform components prior to decoding. In fact, Kim teaches away from the claimed invention by decoding first. Therefore, the withdrawal of the rejection and the allowance of amended claim 1 are respectfully requested.

Claims 2-4 depend from amended claim 1 and recite further limitations in combination with the novel and unobvious elements of claim 1. Therefore, the allowance of claims 2-4 is respectfully requested.

Independent claim 7 has also been amended to recite that the step of downscaling the compressed video bit stream includes removing transform components. Therefore, for the reasons discussed above for claim 1, the withdrawal of the rejection and the allowance of amended claim 7 are respectfully requested.

Claims 8-9 depend from amended claim 7 and recite further limitations in combination with the novel and unobvious elements of claim 7. Therefore, the allowance of claims 8-9 is respectfully requested.

Independent claim 11 has been amended to recite signal processing circuitry that downscales the compressed video bit stream *to remove transform components*, and, thereafter, decodes the downscaled compressed video bit stream. Therefore, for the reasons discussed above for claim 1, the withdrawal of the rejection and the allowance of amended claim 11 are respectfully requested.

Claim 17 has been canceled because its limitations have been incorporated into claim 18 to place claim 18 in allowable form.

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For the above reasons, the Applicant respectfully requests the withdrawal of the rejection of claims 1-4, 7-9, 11 and 17 under 35 U.S.C. § 102(e).

In paragraph 3 of the Office Action, the Examiner rejected claims 6 and 13-15 under 35 U.S.C. § 102(e) as being anticipated by Boyce, et al. (US 6,563,876). The Applicant has amended the claims to better distinguish the claimed invention from Boyce. The Examiner's consideration of the amended claims is respectfully requested.

Claim 6 depends from amended claim 1 and recites further limitations in combination with the novel and unobvious elements of claim 1. As noted above, amended claim 1 recites that the method *first* downscales the compressed video bit stream by *removing transform components*; and *thereafter*, the method decodes the downscaled compressed video bit stream to provide the video signal having the second resolution. The Applicant contends that Boyce, like Kim, does not disclose downscaling by removing the transform components prior to decoding. All of the figures in Boyce clearly indicate that the bit-stream passes through the variable length decoder (VLD) 120 prior to the downsampler 126. Therefore, the allowance of claim 6 is respectfully requested.

Independent claim 13 has been rewritten to incorporate the limitations of dependent claim 16. As noted below, the Examiner stated that claim 16 recites allowable subject matter. Claim 16 has been canceled. Therefore, the allowance of amended claim 13 is respectfully requested.

Claims 14-15 depend from amended claim 13 and recite further limitations in combination with the novel elements of claim 13. Therefore, the allowance of claims 14-15 is respectfully requested.

For the above reasons, the Applicant respectfully requests the withdrawal of the rejection of claims 6 and 13-15 under 35 U.S.C. § 102(e).

3.) Claim Rejections – 35 U.S.C. § 103(a)

In paragraphs 4-5 of the Office Action, the Examiner rejected claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Kim in view of Boyce (US 6,343,098). The Examiner stated that Kim shows most of the limitations of claim 5, but is silent about the

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first and second resolutions being CIF and QCIF, respectively. The Examiner contends that Boyce shows this limitation.

However, claim 5 depends from amended claim 1 and recites further limitations in combination with the novel and unobvious elements of claim 1. The Applicant contends that neither Kim nor Boyce teach or suggest the limitation in claim 1 of downscaling by removing the transform components prior to decoding. Therefore, the allowance of claim 5 is respectfully requested.

4.) Allowable Subject Matter

In paragraph 6 of the Office Action, the Examiner objected to claims 10, 12, 16, and 18 as being dependent on a rejected base claim, but stated that they would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Regarding claims 10 and 12, the Applicant would like to reserve rewriting the claims until the Examiner has reviewed the amendments herein to base claims 1 and 11.

Independent claim 13 has been rewritten to incorporate the limitations of allowable claim 16, and claim 16 has been canceled. Therefore, the allowance of amended claim 13 is respectfully requested.

Claim 18 has been rewritten in independent form including all the limitations of base claim 17, and base claim 17 has been canceled. Therefore, the allowance of amended claim 18 is respectfully requested.

5.) New Claims

New claims 19, 22, and 25 depend from base claims 1, 7, and 11, respectively, and add the limitation that the transform components are discrete cosine transform (DCT) components. The allowance of claims 19, 22, and 25 is respectfully requested for the reasons discussed above for claims 1, 7, and 11.

New claims 20-21, 23-24, 26-27, and 28-29 depend from base claims 1, 7, 11, and 13, respectively, and add the limitations that the first and second resolutions may be provided by MPEG or by PGA video formats. Support for these claims is found in

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the originally filed specification on page 2, lines 18-21. The allowance of claims 20-21, 23-24, 26-27, and 28-29 is respectfully requested for the reasons discussed above for claims 1, 7, 11, and 13.

6.) Prior Art Not Relied Upon

In paragraph 7 of the Office Action, the Examiner stated that the prior art made of record and not relied upon is considered pertinent to the Applicant's disclosure. However, the Applicant's reading of the references does not reveal any teaching of a system or method in which the compressed video bit stream is downscaled by removing the DCT components prior to decoding, as claimed by the Applicant.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 1-15 and 18-29.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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